

REMARKS/ARGUMENTS

Claims 1-44 are pending in the application.

Claims 1-44 stand rejected.

Claims 2-4, 11-13, 18-20, and 32-34 have been canceled, without prejudice.

Claims 1, 5, 10, 17, 21, 31 and 35 have been amended. Support for these amendments can be found throughout the specification and drawings, as originally filed.

35 USC §102(b) REJECTION

Claims 1-44 stand rejected under 35 USC §102(b) as being anticipated by U.S. Patent No. 4,728,761 to Mucha et al.

The Applicant respectfully traverses the 35 USC §102(b) rejection of claims 1-44.

Claims 2-4, 11-13, 18-20, and 32-34 have been canceled, without prejudice, and the language contained therein has been substantially incorporated into their corresponding independent claims.

The law is clear that anticipation requires that a single prior art reference disclose each and every limitation of the claim sought to be rejected. 35 U.S.C. §102(b).

The law is also clear that a claim in dependent form shall be construed to incorporate all the limitations of the claim to which it refers. 35 U.S.C. §112 ¶ 4.

In the interests of expediting the prosecution of the instant application, and without admission that any amendment is necessary, the Applicant has amended claim 1 to recite, among other things, a system for induction heating a work piece, wherein the work piece has a first central axis extending longitudinally therethrough, comprising: (1) an induction heating member having an outer surface and an inner surface, wherein the inner surface defines a void, wherein the void includes a second central axis extending

longitudinally therethrough, wherein the first central axis is concentric to the second central axis, wherein the work piece includes an irregularly shaped outer surface, wherein the outer surface includes a first portion and a spaced and opposed second portion, wherein the outer surface of the work piece is operable to be received within the void of the induction heating member; (2) a fixturing member selectively operable to fix the work piece thereon, wherein the fixturing member is operable to be at least partially received within the void, wherein the fixturing member includes a third central axis extending longitudinally therethrough, wherein the third central axis is eccentric to the first and second central axes; and (3) a rotation member selectively operable to rotate the fixturing member, wherein the first and second portions of the work piece are substantially equidistant from the inner surface of the induction heating member during an induction heating operation.

In the interests of expediting the prosecution of the instant application, and without admission that any amendment is necessary, the Applicant has amended claim 10 to recite, among other things, a system for induction heating a work piece having an outer surface and an inner surface, wherein the inner surface defines a first void, wherein the first void includes a first central axis extending longitudinally therethrough, comprising: (1) an induction heating member having an outer surface and an inner surface, wherein the inner surface defines a second void, wherein the second void includes a second central axis extending longitudinally therethrough, wherein the first central axis is concentric to the second central axis, wherein the outer surface of the work piece is irregularly shaped, wherein the outer surface includes a first portion and a spaced and opposed second portion, wherein the outer surface of the work piece is operable to be received within the void of the induction heating member; (2) a fixturing

member selectively operable to fix the work piece thereon, wherein the fixturing member is operable to be at least partially received within the second void, wherein the fixturing member includes a third central axis extending longitudinally therethrough, wherein the third central axis is eccentric to the first and second central axes; and (3) a rotation member selectively operable to rotate the fixturing member during an induction heating operation, wherein the outer surface of the work piece is operable to be substantially evenly heated by the induction heating member, wherein the first and second portions of the work piece are substantially equidistant from the inner surface of the induction heating member during the induction heating operation.

In the interests of expediting the prosecution of the instant application, and without admission that any amendment is necessary, the Applicant has amended claim 17 to recite, among other things, a method for induction heating a work piece, wherein the work piece has a first central axis extending longitudinally therethrough, comprising: (1) providing an induction heating member having an outer surface and an inner surface, wherein the inner surface defines a void, wherein the void includes a second central axis extending longitudinally therethrough, wherein the first central axis is concentric to the second central axis, wherein the work piece includes an irregularly shaped outer surface, wherein the outer surface includes a first portion and a spaced and opposed second portion, wherein the outer surface of the work piece is operable to be received within the void of the induction heating member; (2) providing a fixturing member selectively operable to fix the work piece thereon, wherein the fixturing member is operable to be at least partially received within the void, wherein the fixturing member includes a third central axis extending longitudinally therethrough, wherein the third central axis is eccentric to the first and second central axes; and (3) providing a rotation

member selectively operable to rotate the fixturing member during an induction heating operation, wherein the first and second portions of the work piece are substantially equidistant from the inner surface of the induction heating member during the induction heating operation.

In the interests of expediting the prosecution of the instant application, and without admission that any amendment is necessary, the Applicant has amended claim 31 to recite, among other things, a method for induction heating a work piece, wherein the work piece has a first central axis extending longitudinally therethrough, comprising:

(1) providing an induction heating member having an area defining a void, wherein the void includes a second central axis extending longitudinally therethrough, wherein the first central axis is concentric to the second central axis, wherein the work piece includes an irregularly shaped outer surface, wherein the outer surface includes a first portion and a spaced and opposed second portion, wherein the outer surface of the work piece is operable to be received within the void of the induction heating member;

(2) providing a fixturing member selectively operable to fix the work piece thereon, wherein the fixturing member is operable to be at least partially received within the void, wherein the fixturing member includes a third central axis extending longitudinally therethrough, wherein the third central axis is eccentric to the first and second central axes; and (3) providing a rotation member selectively operable to rotate the fixturing member during an induction heating operation, wherein the first and second portions of the work piece are substantially equidistant from the inner surface of the induction heating member during the induction heating operation.

Mucha et al. do not teach such systems and/or methodologies.

Specifically, Mucha et al. fail to teach that the central axis of the work piece is eccentric to the central axis of the fixturing member (e.g., the upper or lower heads). In fact, Fig. 1 makes it clear that the central axes of the work piece and the fixturing member are axially concentric, in direct contradistinction to the claimed invention.

Additionally, Mucha et al. fail to teach that the first and second portions of the work piece (e.g., the lobe and the heel) are substantially equidistant from the inner surface of the induction heating member during an induction heating operation. In fact, Mucha et al. teaches the exact opposite. It appears that the lobe portion is to be brought into close proximity to the gap portion of the inductor ring, as clearly shown in Fig. 6.

Furthermore, Mucha et al. fail to teach that the rotation member is selectively operable to rotate the fixturing member during an induction heating operation. In fact, Mucha et al. teaches the exact opposite. While it appears that the rotation members can rotate the work piece in an indexing manner, there is no disclosure that the rotation members are operable to rotate the work piece while induction heating is occurring. In fact, Mucha et al. seem to specifically teach that the work piece is to be held in a fixed position while induction heating is occurring (see Abstract), in direct contradistinction to the claimed invention.

Accordingly, Mucha et al. do not anticipate claims 1, 10, 17, and/or 31 for at least the reasons set forth above.

Furthermore, dependent claims 5-9, 14-16, 21-30, and 35-44, which depend from and further define independent claims 1, 10, 17 and 31, respectively, are likewise not anticipated by Mucha et al.

Accordingly, the Applicant submits that the 35 USC §102(b) rejection of claims 1, 5-10, 14-17, 21-31 and 35-44 has been overcome.

Furthermore, the Applicant submits that Mucha et al. do not render claims 1, 5-10, 14-17, 21-31 and 35-44 obvious.

The standard for obviousness is that there must be some suggestion, either in the reference or in the relevant art, of how to modify what is disclosed to arrive at the claimed invention. In addition, "[s]omething in the prior art as a whole must suggest the desirability and, thus, the obviousness, of making" the modification to the art suggested by the Examiner. *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 1051, 5 U.S.P.Q.2d (BNA) 1434, 1438 (Fed. Cir.), cert. denied, 488 U.S. 825 (1988). Although the Examiner may suggest the teachings of a primary reference could be modified to arrive at the claimed subject matter, the modification is not obvious unless the prior art also suggests the desirability of such modification. *In re Laskowski*, 871 F.2d 115, 117, 10 U.S.P.Q.2d (BNA) 1397, 1398 (Fed. Cir. 1989). There must be a teaching in the prior art for the proposed combination or modification to be proper. *In re Newell*, 891 F.2d 899, 13 U.S.P.Q.2d (BNA) 1248 (Fed. Cir. 1989). If the prior art fails to provide this necessary teaching, suggestion, or incentive supporting the Examiner's suggested modification, the rejection based upon this suggested modification is error and must be reversed. *In re Bond*, 910 F.2d 831, 15 U.S.P.Q.2d (BNA) 1566 (Fed. Cir. 1990).

Mucha et al. fail to suggest that the central axis of the work piece is eccentric to the central axis of the fixturing member (e.g., the upper or lower heads). In fact, Fig. 1 makes it clear that the central axes of the work piece and the fixturing member are axially concentric, in direct contradistinction to the claimed invention.

Additionally, Mucha et al. fail to suggest that the first and second portions of the work piece (e.g., the lobe and the heel) are substantially equidistant from the inner surface of the induction heating member during an induction heating operation. In fact, Mucha et al. teaches the exact opposite. It appears that the lobe portion is to be brought into close proximity to the gap portion of the inductor ring, as clearly shown in Fig. 6.

Furthermore, Mucha et al. fail to suggest that the rotation member is selectively operable to rotate the fixturing member during an induction heating operation. In fact, Mucha et al. teaches the exact opposite. While it appears that the rotation members can rotate the work piece in an indexing manner, there is no disclosure that the rotation members are operable to rotate the work piece while induction heating is occurring. In fact, Mucha et al. seem to specifically teach that the work piece is to be held in a fixed position while induction heating is occurring (see Abstract), in direct contradistinction to the claimed invention.

Therefore, one of ordinary skill in the art would not look to Mucha et al. for guidance on constructing and/or operating an induction heating system as presently claimed.

Accordingly, Mucha et al. do not render claims 1, 10, 17, and/or 31 obvious for at least the reasons set forth above. Furthermore, dependent claims 5-9, 14-16, 21-30, and 35-44, which depend from and further define independent claims 1, 10, 17 and 31, respectively, are likewise not rendered obvious by Mucha et al.

35 USC §102(b) REJECTION

Claims 1-6, 10-13, 17-23, 27-37 and 41-44 stand rejected under 35 USC §102(b) as being anticipated by U.S. Patent No. 3,737,613 to Gillock.

The Applicant respectfully traverses the 35 USC §102(b) rejection of claims 1-6, 10-13, 17-23, 27-37 and 41-44. Claims 2-4, 11-13, 18-20 and 32-34 have been canceled, without prejudice, and the language contained therein has been substantially incorporated into their corresponding independent claims.

Specifically, Gillock fails to teach that the central axis of the work piece is eccentric to the central axis of the fixturing member (e.g., the conical members contacting centers 10, 12, respectively, of the work piece). In fact, Fig. 1 makes it clear that the central axes of the work piece and the fixturing member(s) are axially concentric, in direct contradistinction to the claimed invention.

Additionally, Gillock fails to teach that the fixturing members are operable to be at least partially received within the void of the inductor ring, for example. In fact, the previously noted conical members appear to merely hold the work piece during rotation thereof, and do not appear to interact in any way with the inductor ring.

Accordingly, Gillock does not anticipate claims 1, 10, 17, and/or 31 for at least the reasons set forth above.

Furthermore, dependent claims 5-6, 21-23, 27-30, and 35-44, which depend from and further define independent claims 1, 10, 17 and 31, respectively, are likewise not anticipated by Gillock.

Additionally, the Applicant submits that Gillock does not render claims 1, 5, 6, 10, 17, 21-23, 27-31 and 35-44 obvious.

Gillock fails to suggest that the central axis of the work piece is eccentric to the central axis of the fixturing member (e.g., the conical members contacting centers 10, 12, respectively, of the work piece). In fact, Fig. 1 makes it clear that the central axes of the work piece and the fixturing member(s) are axially concentric, in direct contradistinction to the claimed invention.

Furthermore, Gillock fails to suggest that the fixturing members are operable to be at least partially received within the void of the inductor ring, for example. In fact, the previously noted conical members appear to merely hold the work piece during rotation thereof, and do not appear to interact in any way with the inductor ring.

Therefore, one of ordinary skill in the art would not look to Gillock for guidance on constructing and/or operating an induction heating system as presently claimed.

Accordingly, Gillock does not render claims 1, 10, 17, and/or 31 obvious for at least the reasons set forth above. Furthermore, dependent claims 5-6, 21-23, 27-30, and 35-44, which depend from and further define independent claims 1, 10, 17 and 31, respectively, are likewise not rendered obvious by Gillock.

CONCLUSION

In view of the foregoing, the Applicant respectfully requests reconsideration and reexamination of the Application. The Applicant respectfully submits that each item raised by the Examiner in the Office Action of September 8, 2004 has been successfully traversed, overcome or rendered moot by this response. The Applicant respectfully submits that each of the claims in this Application is in condition for allowance and such allowance is earnestly solicited.

The Examiner is invited to telephone the Applicant's undersigned attorney at (248) 364-4300 if any unresolved matters remain.

Any needed extension of time is hereby requested with the filing of this document.

The Commissioner is authorized to charge any additional fees or credit any overpayment to Deposit Account No. 50-1612. A duplicate copy of this letter is enclosed herewith.

Respectfully submitted,

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Dated: Dec 8/2004

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